**NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 6.1 Notes**

**Directions: Define the following terms using the book. Also, complete the problems using the book.**

Experiment vs. Observational Study (again):

Explanatory Variable-

Response Variable-

Individuals = the things that the experiment or study is being done on (ex: cars, plants, etc.)

Subjects= ***humans*** who are in the experiment or study.

Treatment-

**Example 1:** Go back to our activity 6.1 with the number guessing. Identify the following:

Subjects/Individuals: ***Intro to stat students (subjects)***

Treatment: ***guessing numbers***

Explanatory Variable: ***generating/guessing numbers***

Response Variable: ***Correct or Incorrect guesses***

Experiment or Obs. Study: ***Experiment***

**Example 2:** I want to test out a new plant food. So I take 20 plants, and give half the new plant food and half no food at all. All of the plants get the same amount of water and sunlight each day. After 30 days, I measure the height that the plant has grown, and also how many flowers it has on it.

Subjects/Individuals: ***20 plants (Individuals)***

Treatments (there are two):

Explanatory Variable: ***Plant food***

Response Variable:

Experiment or Obs. Study:

**Example 3:** I want to look at the effect of AP classes on college acceptances. I get a list of all students in a high school, as well as the number of AP classes each student took over their 4 years of HS. I then obtain the % of college they were accepted into. I compare the % acceptance for the students who did not take AP classes to those that did.

Subjects/Individuals:

Treatments (are there any?):

Explanatory Variable:

Response Variable:

Experiment or Obs. Study: ***observational study***

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**Designing studies- what can go wrong:**

Lurking variables (again)-

Confounded variables (again)-

**More vocab…**

Clinical trials-

Placebo-

*Example:*

Placebo Effect -

*Example:*

Complete the following book problems: p. 261 #1, 2, 4, 6